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UNITED STATES
DEPARTMENT OF THE INTERIOR
Fish and Wildlife Service
Bureau of Sport Fisheries and Wildlife
Peachtree-Seventh Building
Atlanta, Georgia 30323

March 28, 1972

Memorandum

To: All Project Leaders

From: Regional Director, Atlanta, Georgia

Subject: National Oil and Hazardous Substances Pollution Contingency Plan

This instruction advises of the current National Oil and Hazardous Materials Contingency Plan, the Bureau's role in effecting the Plan, and guidelines for handling pollution incidents.

1. Authority

The Plan has been developed in compliance with the Federal Water Pollution Control Act, as amended (33 U.S.C. 1151, et seq).

2. Purpose and Objective

The Plan provides a pattern for coordinated and integrated action by Federal agencies to protect the environment from the damaging effects of pollution spills.

3. Scope

The Plan is applicable to all U. S. navigable waters, their tributaries, and adjoining shorelines. This includes inland rivers, Great Lakes, coastal territorial waters, the contiguous zone and high seas where there exists a threat to U. S. waters, shoreface, or shelf-bottom.

4. Definitions

Oil: Including but not limited to petroleum, fuel oil, sludge, oil refuse and oil mixed with water.

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Hazardous Polluting Substances: Element or compound other than oil which when discharged in any quantity into waters presents an imminent or substantial threat to public health or welfare. There are well over 100 chemicals considered most widely used in bulk shipments. Due to wide range in toxicity, it is not possible to assign gallonage levels to indicate pollution emergencies.

Minor Spill: Discharge of oil of less than 1,000 gallons in inland waters, or less than 10,000 gallons in coastal waters or a discharge of any material in a quantity that does not pose a threat to the public health or welfare.

Medium Spill: Discharge of oil of 1,000-10,000 gallons in inland waters or 10,000-100,000 gallons in coastal waters, or discharge of any quantity of materials that occur in or endanger critical water areas, generate critical public concern or pose a threat to public health or welfare.

Major Spill: More than 10,000 gallons of oil in inland waters or more than 100,000 gallons in coastal waters, or any quantity of material that substantially threatens public health or welfare or generates wide public alarm.

Potential Spill: Accident or other circumstances which threatens to result in discharge of oil or other hazardous materials.

Inland Waters: Generally those navigable fresh water and tributaries upstream from coastal waters.

Coastal Waters: Generally those U. S. marine waters navigable by deep draft vessels.

Contiguous Zone: Twelve miles seaward from baseline where territorial sea begins.

5. Contingency Plan

Phase I - Discovery and Notification

May be by a report received from the discharger, through deliberate discovery by patrol, or random discovery by incidental observations of personnel of government agencies or the general public.

Phase II - Containment and Counter

Defensive measures including public health protection, source control, salvage operations, placement of physical barriers to halt or slow spread of pollutants and use of chemicals and other material to restrain the pollutant.

Phase III - Cleanup and Disposal

Includes those actions taken to remove pollutant from water and onshore areas such as collection of oil through use of sorbers, skimmers or other devices, removal of beach sand and safe nonpolluting disposal of pollutants recovered in cleanup process.

Phase IV - Restoration

Action to restore environment to its pre-spill condition, including assessment of damage incurred.

Phase V - Recovery of Damages and Enforcement

Recovering of Federal cleanup costs and recovery for damage done to Federal, State, or local government property. Enforcement and redress activities relate to authorities such as Water Pollution Control Act and Refuse Act of 1899.

6. Contingency Plan in Action

On-Scene Coordination: Coordination and direction of Federal pollution control efforts at the scene of a spill or potential spill is accomplished through an On-Site Coordinator (OSC). The Environmental Protection Agency (EPA) furnishes or provides for OSC's on inland navigable waters and their tributaries. The United States Coast Guard furnishes or provides for OCS's for the high seas, coastal, and contiguous zone waters. However, the first Federal official on the site shall assume coordination of activities until the arrival of the predesignated OSC.

Bureau Participation

Phase I - Discovery and notification

If discovery is made by Bureau personnel, gather gross data such as location, material involved (example - crude oil,

petroleum, phenol, caustic soda), source of spill (example - barge collision, pipeline break, tank car wreck), magnitude of spill, and, if available, name of discharger.

Telephone the appropriate Environmental Protection Agency Regional Office or Coast Guard District (refer to attachments A and B for jurisdictions). Give your name and title and report details of the spill. Provide them a telephone number through which messages may be relayed to you. Telephone report to the Bureau Regional Office as follows:

Ernest C. Martin, Regional Environmental Coordinator
Office phone (404) 526-5101
Home phone (404) 633-5888

Alternates

Alex Montgomery, Regional Supervisor, Division of Fishery
Services
Office phone (404) 526-3132
Home phone (404) 237-9908

Fred A. Williams, Regional Supervisor, Division of
Management and Enforcement
Office phone (404) 526-5106
Home phone (404) 261-1869

If unable to reach above, report to your Regional or Acting Supervisor.

Phase II - Containment and Countermeasures

If Bureau employee is first Federal official on the scene, he assumes coordination of activities of Contingency Plan until relieved by predesignated OSC or is instructed otherwise.

WHAT TO DO - (Circumstances will dictate order of action)

1. Establish communication point. Recruit help to assist in relaying messages and gathering information.
2. Assess the situation in light of threat posed to public health or welfare and make appropriate warnings. (Example - arrange

notification to municipalities whose water supply may become contaminated; get law enforcement help if there is danger of explosions or fire and warn nearby residents.)

3. Contact discharger and impress on him need to bring his resources to bear to curtail and contain spill. If necessary, warn him of legal responsibility for cleanup and violations of law.
4. Initiate spill combat techniques (see attachment C).
5. Collect samples of the pollutant from the water and drainage points from offending vessel, shore establishments or other sources and samples of unaffected water in vicinity of spill. Use clean, one quart glass containers. When oil or petroleum hydrocarbon are sampled, the closure of containers should be made of glass, aluminum foil or teflon. Label as to time sequences and places.
6. If possible, take photographs, both color and black and white. Note date, time, and location of each.
7. Obtain name, address and position of witnesses.
8. Assess extent of fish and wildlife habitat involved and possible losses to the resource. Initiate action to alleviate or eliminate these losses, remembering that matters of public safety and health come first. If assistance is needed to avert fish and wildlife losses, contact the designated Regional Office personnel for help.

Normally, the Bureau will first enter the contingency plan sequence at some stage in Phase II or early part of Phase III. In such instances, the Regional Office will be notified through EPA or the Coast Guard that a spill has occurred. Depending on location and preliminary implications, the Regional Office will contact appropriate Bureau field personnel and instruct them to proceed with all feasible speed to the scene of the pollution disaster and:

1. Report to On-Scene-Coordinator (usually Regional Office will have been advised of OSC emergency headquarters).
2. Assess extent of fish and wildlife involvement or potential involvement, and possible losses to fish and wildlife.

3. Recommend to OSC steps to alleviate or eliminate fish and wildlife losses, remembering that matters of public health and safety come first.

4. Keep Regional Office informed of the problems and control progress and request assistance if needed.

5. Maintain liaison with the State game and fish department people and assist in all feasible ways to alleviate the problem.

Phase III - Cleanup and Disposal

Continue assistance as above.

Phase IV - Restoration

Assess damages to fish and wildlife resources and to fish and wildlife facilities and recommend restoration measures.

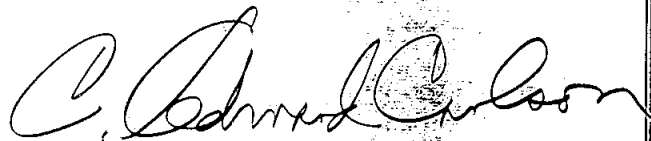
Phase V - Recovery of Damages and Enforcement

There may be adequate legal basis for the Bureau to claim compensation from the polluter for time and travel and other costs incurred in surveying and taking action on environmental damage. This is especially germane where Bureau lands are threatened or damaged, or where a resource for which the Bureau has primary responsibility, such as migratory birds, is involved.

Under no circumstances should you inform the polluter that he may be faced with a financial claim. This determination will be made by this office after consulting with the Department's legal counsel.

All personnel involved in pollution contingency operations or environmental assessments resulting from polluting spills, or other types of environmental damage or threats thereto, will keep complete records of time, travel, and other incidental costs incurred. Costs for special equipment, materials, and supplies required should be recorded. Upon assignment completion, cost records, together with a complete report, will be sent to the Regional Director.

Action required under this contingency plan will take precedence over any other assignment. The Regional Environmental Coordinator or his alternates listed as principal Bureau contacts on pollution matters shall exercise line authority during emergency periods.

A handwritten signature in cursive script, appearing to read "C. Edmund Carlson".

Attachments

Safe '72 Depends on You!

Attachment A

Environmental Protection Agencies Regional Offices
(Inland water spills reported to following jurisdictions)

Region II

New York, N. Y.
AC 201/548-3515 (office)
AC 201/548-8730 (24-hr)

Puerto Rico, Virgin Islands

Region III

Philadelphia, Pa.
AC 215/597-9390 (office)
AC 215/597-9898 (24-hr)

Maryland, Virginia

Region IV

Atlanta, Georgia
AC 404/526-5103 (office)
AC 404/526-5062 (24-hr)

North Carolina, South Carolina
Georgia, Florida, Alabama,
Mississippi, Tennessee, Kentucky

Region VI

Dallas, Texas
AC 214/749-3840 (office)
AC 214/424-5341 (24-hr)

Arkansas, Louisiana

U. S. Coast Guard Districts
(Offshore and coastal spills reported to following jurisdictions)

5th Coast Guard District
Federal Building
431 Crawford Street
Portsmouth, Virginia 23705
Duty Officer 703/393-6081

Maryland, Virginia,
North Carolina

7th Coast Guard District
Room 1018 Federal Building
51 S. W. 1st Avenue
Miami, Florida 33130
Duty Officer 305/350-5611

South Carolina, Georgia
Florida (except Panhandle area
west of St. Marks),
Puerto Rico, Virgin Islands

8th Coast Guard District
Customhouse
New Orleans, Louisiana 70130
Duty Officer 504/527-6225

Florida (Panhandle west of
St. Marks), Alabama,
Mississippi, Louisiana

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Attachment C

(From Region IV EPA, Oil and
Hazardous Materials Contingency Plan)

SPILL COMBAT TECHNIQUES

CONTAINMENT

Containment of the pollutant is the first major activity in a pollution control situation. The ability to confine a spill in the area immediately adjacent to the source at the earliest possible moment is of paramount importance. Containment may be accomplished through the use of float-int booms. Although commercial oil booms are available in many areas throughout the Southeast Region, the OSC should not hesitate to improvise a boom from other materials whenever a delay in obtaining a conventional boom would result in widespread dispersal of the pollutant. There are several containment techniques available to the On-Scene Coordinator. The first to be considered are pre-existing barriers that may sometimes be used for this purpose, such as dams, slips, dikes, and breakwaters. Unfortunately, however, not many locations can be protected this easily and it is generally necessary to resort to artificial barriers which may consist of logs, chicken or hog wire, backed by hay, and other makeshift devices or especially designed floating booms.

The word "Boom" refers to a floating device - commercial or hand-made - that serves to contain floating oil on the water surface. They may be towed in place with boats, or they may sometimes be placed across a channel or slip by hauling them across with a line. Once a boom has been secured in place, a continuous watch should be maintained and the mooring devices tended as necessary. Booms are endangered, not only by the strains resulting from the current, but also by floating debris in the water. Large objects such as a tire or log might cause trouble and should be guarded against.

SOURCE CONTROL

Source control of the spill should be erected simultaneously with the containment operation and is equally important. The origin of the material being discharged should be determined and additional quantities prevented from spilling. While each case must be considered individually, some

examples of source control are: closing valves to stop the flow of oil from a ruptured pipeline, pumping out a holed tanker to prevent further discharge, or erecting sand or earthen dikes to prevent or stop a discharge occurring on shore from entering the water.

PROTECTION OF THE ENVIRONMENT

Protection of the environment should be instituted as promptly as possible after determining the seriousness of the spill and the areas likely to be affected. Such protection activities might include - but not be limited to - booming off certain critical areas, such as water intakes, marinas, critical port areas, fishing areas, beaches, and wildlife sanctuaries.

CLEAN-UP AND RECOVERY OF POLLUTANT

Removal of the pollutant must proceed as rapidly as circumstances permit since containment measures may not fully contain the spill or they may fail altogether. In the Southeast Region the only practical solution is to physically remove the pollutant from the water. Chemical dispersants and sinking agents should only be used in accordance with the guidelines laid down in this enclosure and then only with the concurrence of EPA.

Chemicals may be used at the discretion of the OSC when the fire and explosion hazard inherent in spills of volatile materials outweigh all other considerations. Collection techniques include mechanical skimming, chemical solidification for later collection, and absorption by suitable materials such as straw and plastic absorbents.

CURRENT EPA POLICY ON THE USE OF CHEMICALS TO COMBAT OIL SPILLS

Chemicals should not be used to emulsify, disperse, solubilize, or precipitate oil whenever the protection or preservation of (a) fresh water supply sources; (b) major shellfish or fin fish nurseries, harvesting grounds or passage areas; or (c) beaches - is a prime concern.

Such chemicals should only be used in those surface waters areas and under those circumstances where preservation and protection of water related natural resources is judged not to be the highest priority or where a choice as to resource preservation may make the use of such materials a necessary alternative.

Examples of areas and circumstances where the use of such chemicals might be acceptable are:

- a. Where fire or safety hazards are presented by the spill of a petroleum product;
- b. Where large numbers of waterfowl may perish because of the proximity of floating oil;
- c. Under certain conditions, as a "polishing" or final clean-up of light slicks of oil following mechanical removal of floating oils.

Chemicals that emulsify, disperse, solubilize or precipitate oil should be used under immediate supervision of EPA except where it is judged that fire or safety hazards require the immediate application of such chemicals.

When chemical compounds are used in connection with oil clean-up, only those compounds exhibiting minimum toxicity toward one aquatic flora and fauna should be used. EPA is now developing, and will soon issue, a standard procedure for determining the toxicity of such chemicals.

Materials which aid in the collection of floating oils such as sorbents, gellants and viscosity control additives are considered to be generally acceptable providing that these materials do not, in themselves, or in combination with the oil, increase the pollution hazard.

Research and development to improve chemicals which emulsify, disperse, solubilize or precipitate oil is encouraged. Whenever it is demonstrated to the complete satisfaction of the EPA that chemical, by itself and in combination with oil, is non-toxic - its use may be approved in areas where the protection or preservation of (a) fresh water supply sources, (b) major shellfish or fin fish nurseries, harvesting grounds or passage areas is a prime concern.

RECOVERY METHODS - SKIMMING

These techniques involve removing the surface layer of water and the oil floating on it. Usually, a pump is used to move the fluid and the pump inlet is designed so as to maximize the oil/water ratio of the fluid. If the pump is self-priming and can tolerate air-water mixtures, then a vacuum-cleaner type inlet might be considered. Normally, large capacity pumps will require an inlet pump of some kind so as to avoid the entrainment of air.

Other skimming devices operate in the manner of a dust pan; a moving skimmer blade scoops oil from the surface. Still others employ wettable absorbent material which is dragged over the oil slick and then wrung out into the holding tank of the recovery vessel.

Because the oil/water recovery ratio is at best small, an important auxiliary to a skimming device is a scotching tank where the oil/water mixture can be allowed to separate and the water drawn off the bottom and discarded.

With the exception of the sponge-type skimmers, the other devices operate on the assumption that the oil/water interface is a horizontal plane; they perform poorly in agitated conditions. The efficiency of the system depends too on the nature of oil; a free flowing oil is more easily skimmed than a viscous oil. The oil/water ratio and the recovery rate are augmented by an increase in the thickness of the oil pool. Oil-proof booms may be used to increase the thickness of the oil pool at the entrance of the skimmer.

Most of the commercially available skimmers are designed for refinery waste water holding ponds or clean-ups in harbors where small quantities of oil are recovered under calm conditions. The "sponge" type machines are easily damaged by floating debris picked up along with the oil.

For the clean-up of inshore regions and harbors, it is possible to adapt pumping vehicles such as those used to clean septic tanks and sewers. For efficient oil recovery it would be advisable to construct low velocity pick-up nozzles; some experimentation might be worthwhile to develop a pick-up nozzle which could be made up in short order from sheet metal and plywood. By pumping for intervals, allowing the oil/water mixture to settle, and then draining the water from the bottom of the tank, it would be possible to increase the amount of oil recovered per truckload.

RECOVERY METHODS - ABSORBING AND COAGULATING

The main purpose of this technique is to give the floating oil a "handle" either by absorbing (or adsorbing) it with particulate solid, or else by treating it with a chemical substance which causes it to thicken or jell. The oil may then be removed by lifting it (and the absorbents) from the water surface with a sieve or a rake (as opposed to pumping).

The best absorbents or adsorbents are those materials which are wetted preferentially by oil. Needless to say, they must float. Such natural products as hay, crushed peanut shells, crushed corncobs, together with a long list of commercial absorbents, are both useful and acceptable.

The absorbent is spread on the slick surface from a boat, allowed to act on the oil surface, and then the oil and adsorbent are removed together. Another method consists of forming a boom of loosely woven sacks filled with adsorbent and then dragging the boom through an oil slick. Chicken-wire or fish net could be used to form the supporting structure of the boom. The disadvantage of this scheme is the necessity of replacing the oil adsorbent material as its adsorbent capacity is used up.

For spills of heavy bunker oil in cold water, in which the oil forms tarry globs, adsorbents will not be effective. A porous "sweeping" boom made of fish net or wire mesh might be useful.

One aspect of the use of absorbents which deserves special mention is that of disposing of the oil-soaked adsorbents. Some of the plastic materials, inert to normal processes of decomposition, will give off poisonous fumes when burned, and so must be buried permanently.

Generally speaking, the successful use of adsorbents is less dependent on weather conditions and more suited to improvised means than other techniques. One adsorbent material - straw - offers many advantages:

1. It is available in quantity and at short notice.
2. It is cheap.
3. It is easily handled in bales and is non-toxic.
4. Farm and road building machinery can be used to spread it (mulchers and spreaders).
5. It can be raked and gathered with simple instruments (rakes, pitchforks).
6. It can be destroyed by burning without releasing poisonous fumes; it will decay naturally, left to itself.
7. Fresh straw can absorb up to five (5) times its own weight in oil.

DISPOSAL OF COLLECTED MATERIAL

Disposal of the recovered material is an important aspect of any clean-up operation. Petroleum products and other obnoxious and

hazardous materials removed from the water may eventually find their way back to cause more pollution when carelessly disposed of on nearby land areas. Serious pollution of the water table is an additional hazard inherent in this type of disposal.

† Some possible methods for disposing of oil are as follows:

1. Bury it in holes (preferably, clay soil).
2. If storage is possible, perhaps the county can use it on some of the back roads.
3. If not cluttered with straw or other absorbents and it hasn't been on the water for more than three days, a legal "scavenger" may take it for reclamation.

The recovered material should not be burned, even with a permit. Someone may have used a dangerous product such as styrofoam as an absorber. This could create a noxious smoke.

Eventual reuse of recovered materials appears to offer the best solution to this problem. In any case, however, the proper State regulatory official should make the final decision on disposal.